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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,039	05/10/2006	Daniel Hendrix	016906-0512	4979

22428 7590 07/06/2009

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EXAMINER	
WALBERG, TERESA J	

ART UNIT	PAPER NUMBER
3744	

MAIL DATE	DELIVERY MODE
07/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,039	HENDRIX ET AL.	
	Examiner	Art Unit	
	Teresa J. Walberg	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/22/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 April 2009 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5-7, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitriou (4,572,766) in view of Blomgren (WO 03/01010482)(cited by applicant in the IDS of 10 May 2006).

Dimitriou discloses a heat exchanger including a plurality of disks (Fig. 7) with two adjacent disks defining an intermediate space through which a heat exchange medium flows (see abstract), the entry and/or exit region of the heat exchange medium is expanded (interpreted to mean wider than tall) on the discharge or inflow side (24 in Fig. 3), an opening (24) for the second medium is located in an end region of the disks (Fig. 3) and extends over essentially an entire surface of the end region (Fig. 3), heat exchanger passages (32, 33) are

located in the end region of the disks so that they (32, 33) are offset axially in an axial direction of the disks (see Fig. 3) from the opening for the second medium (24) and are located further inward from the end of the disks than the opening for the second medium (see Fig. 3), the region runs at least over a third of the width of the disk perpendicularly to the average flow direction (24 in Fig. 3), with at least two heat exchanger medium passages being provided per inlet or outlet (Fig. 7), the disks being of axially symmetrical design (Fig. 7).

Dimitriou does not disclose the heat exchanger being a charge air coolant radiator or oil cooler. However, charge air coolant radiators and oil coolers are conventional in the art. It would have been obvious in view of to one of ordinary skill in the art to use the heat exchanger of Dimitriou as a charge air coolant radiator or oil cooler, the motivation being to bring the fluids in question to a desired temperature.

Dimitriou does not disclose at least a portion of the heat exchanger medium passages located behind at least a portion of the opening for the second medium.

Blomgren discloses a heat exchanger including at least a portion of the heat exchanger medium passages (1) located behind at least a portion of the opening (4) for the second medium.

It would have been obvious in view of Blomgren to provide at least a portion of the heat exchanger medium passages located behind at least a

portion of the opening for the second medium in the heat exchanger of Dimitriou, the motivation being to enable making the device more compact.

4. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitriou (4,572,766) in view of Blomgren (WO 03/01010482) and further in view of Voss (US 5,230,966).

Dimitriou discloses a heat exchanger having the claimed structure with the exception of the heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees.

Voss discloses a heat exchanger of disk type construction having a heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees (see 61 in Fig. 4).

It would have been obvious to one of ordinary skill in the art in view of Voss to provide the heat exchanger medium inlet or outlet having a branching or junction and the branching being in the shape of an arc of a circle and having a bend of 30 to 90 degrees in the heat exchanger of Dimitriou, the motivation being to provide a more even fluid flow across the plate.

5. Applicant's arguments filed 22 April 2009 have been fully considered but they are not persuasive.

Applicant argues that claim 13 is separately patentable because Dimitriou does not teach use of the device as a charge air cooler or an oil cooler. However, patentability of an apparatus cannot be based on its intended use. It is further noted that the use of heat exchangers as charge air coolers or oil coolers is conventional in the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/

Primary Examiner, Art Unit 3744

/TW/